

WHAT IS CLAIMED IS:

1. A ventilator, comprising:

a case formed with a supply opening, the case having walls opposite to each other formed respectively with a plurality of shaft holes arranged with predetermined intervals;

an operating louver having two longitudinal margins opposite to each other and two ends opposite to each other, each one of the two ends of the operating louver provided with a shaft pin respectively being inserted into the shaft hole, one end of the two ends of the operating louver

provided with an operating pin;

a train louver having two longitudinal margins opposite to each other and two ends opposite to each other, each one of the two ends of the train louver provided with a shaft pin respectively being inserted into the shaft hole, one end of the two ends of the train louver provided with

another operating pin; and

a link formed with a plurality of operation holes receiving the operating pin of the operating louver and the operating pin of the train louver, the link transmitting motion of the operating louver to the train louver so that the operating louver and the train louver jointly shut the supply opening at swing limit of the operating louver in a manner such that the one margin of the operating louver and the one margin of the train louver meet each other, wherein

a biasing device biasing the meeting state of the operating louver and the train louver so that clearance between the operating louver and the train louver is reduced at the swing limit of the operating louver.

2. The ventilator according to claim 1, wherein
gaps (A) between the operation holes on the link are set so as to be
larger than gap (B) between a line connecting the shaft pins of the
5 operating louver and the operation pin ($A > B$).
3. The ventilator according to claim 2, wherein
a stopper unit for holding a turning position of the operating louver
in the fully closed state by means of predetermined force is provided
10 between the operating louver or the link and the inner wall of the supply
opening.
4. The ventilator according to claim 2, wherein
the other margins of the louvers are bent into a crank shape; and
15 surfaces of the louvers in the fully closed state form a continuous
surface.
5. The ventilator according to claim 2, wherein
the supply opening is curved in the longitudinal direction, and
20 lengths of the operation holes formed on the link become longer in the air
supply direction gradually from other end to the one end in the longitudinal
direction except for the operation hole relating to the operating louver.
6. The ventilator according to claim 1, wherein
25 the biasing device includes:

a stopper pin is formed on one end of the louvers opposite to the operation pins; and

an elastic piece whose tip comes in elastically contact with the stopper pin in the fully closed state of the louvers is formed on an inner
5 wall corresponding to the stopper pin.

7. The ventilator according to claim 6, wherein
a guide surface for pushing the stopper pin to a closing direction by means of elastic force is formed on a portion at the tip of the elastic piece
10 which comes in elastically contact with the stopper pin.

8. The ventilator according to claim 7, wherein
the tip of the elastic piece has a curved side surface; and
the guide surface is located on the curved side surface toward the
15 closing direction from an apex farthest from the shaft pin.

9. The ventilator according to claim 6, wherein
the stopper pin is formed on the train louver which is the farthest from the operating louver.

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10. The ventilator according to claim 6, wherein
ribs are formed on the other ends of the louvers curved into a crank shape, respectively; and

the ribs come into contact with the one ends of the louvers adjacent
25 to the other ends and so as to make surfaces of the louvers in the fully

closed state as a continuous surface.

11. The ventilator according to claim 6, wherein
the supply opening is curved in its longitudinal direction; and
5 the operation holes formed on the link are oval holes whose lengths
become longer in an air supply direction gradually from the hole on the
other end to the hole on the one end in the longitudinal direction except for
the operation hole relating to the operating louver.

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